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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/748,769 | EWANCHUK ET AL. | |
| | Examiner | Art Unit | |
| | BRENDAN HIGA | 2453 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *7-11 and 18-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-11 and 18-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This Office action is in response to Applicant's amendment and request for reconsideration filed on April 05, 2010.

Claims 7, 8, 18, 20 and 21 have been amended.

Claims 1-6 and 12-17 have been canceled.

Claims 7-11 and 18-24 are currently pending.

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 18-20, the broadest reasonable interpretation of a claim drawn to a computer readable medium typically covers forms of non-transitory tangible media and transitory propagating signals per se (see http://www.uspto.gov/patents/law/notices/101_crm_20100127.pdf). However, when the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. §101 as covering non-statutory subject matter. *See* In *re Nuijten,* 500 F.3d 1346, 1356-57 (Fed. Cir. 2007).

Here, Applicant's specification (see lines 4-16, on page 23) provides an open-ended definition of a computer readable medium that may lead a person having ordinary skill in the art to read in transitory propagating signals *per se*. Thus, since the

broadest reasonable interpretation of claims 18-20 may cover transitory propagating signals *per se*, the claims must be rejected under 35 U.S.C. §101 as covering non-statutory subject matter.

In order to overcome the 35 U.S.C. §101 rejection of claims 18-20 the examiner would encourage the applicant to limit the scope of claims 18-20 to "a non-transitory computer readable medium".

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 7, 8, 10, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698) in view of Gase (US 6,363,081) ("Gase"), in further view of Welch, Jr. (US 5,862,335)("Welch").**

As per claim 7, Wilson teaches a computerized method comprising:

Receiving, form a first application on a client computer (see ¶0016 - ¶0017, clients 18 running on "processor-based system", read as first application on a client computer), a first request (i.e. a request to register with the connection manager, see ¶0023), at a connection manager (see Fig. 3, ref. 28 and ¶0023), for connection to a remote resource (see "Internet", Fig. 1, ref. 14);

upon receiving the first request for connection, creating the connection between the first application and the remote resource when a physical hardware connection (i.e. dial-up connection) between the computer and the remote resource is not already established (see ¶0028);

receiving, at the connection manager, a second request from a second application for connection to the same remote resource as the first application (see ¶0022-¶0023), the first application, the second application and the connection manager all being located on the same client computer (see Fig. 1, ref. 18c, 18b, and 28, respectively).

sharing the connection to the remote resource between the first and the second application (see abstract "multiple clients use the same connection"), wherein sharing the connection includes having the first and second applications using the same physical hardware connection to the remote resource (see ¶0003, ¶0028, and ¶0036, wherein the first and second applications are using the same dial-up connection to the internet);

receiving a request for a disconnection from either the first or second application for disconnection from a remote resource (i.e. a request to terminate the connection, see ¶0003, ¶0028-¶0029, and ¶0036);

Furthermore, Wilson teaches disconnecting the physical hardware connection upon detecting that all clients have disconnected from the connection (see ¶0025) and maintaining the connection when a client is still registered (see Fig. 3, and ¶0003, ¶0028-¶0029, and ¶0036, wherein the connection is maintained as long as one client is still connected).

However, Wilson does not expressly teach saving in a data structure maintained by the connection manager, a first connection request, an identifier of the first application from which the first request for a connection was received; saving in the data structure, a second connection request data element comprising: an identifier of the second application for which the second request for a connection was received; and, upon a client requesting disconnection from the physical hardware connection, deleting from the data structure, the connection request data element corresponding to the application from which the request for the disconnection was received, whereby the physical hardware connection is disconnected when the deleted connection request data element is the last connection request data element in the data structure, and when the deleted connection request data element is not the last connection request data element.

Nevertheless, in the same art of computer-to-computer session/connection establishing, Gase teaches a system for sharing a connection between multiple

processes (i.e. secondary/primary applications) (see abstract). Furthermore, Gase teaches that the system maintains a distribution list of registered processes that are sharing the connection (see col. 3, lines 38-45, read as a data structure of data elements corresponding to application connection requests comprising: an identifier of the application for which the request for a connection was received). Thus, upon a process registering with the shared connection, identification information associated with the registered process is added to the data structure (see col. 5, lines 52-62). Furthermore, upon a connected process disconnecting from the shared connection, a drop registration message is delivered by the process to remove the registration information from the data structure (see col. 5, lines 52-62).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Gase for modifying the connection manager (i.e. Wilson, Fig. 1, ref. 28) to utilize a data structure of client connection identifiers to determine whether all clients have disconnected from the connection before disconnecting the physical hardware connection (i.e. Wilson ¶0025). The motivation for doing so would have been to take advantage of the simplicity and organizational efficiency inherent to a data structure of client connection identifiers.

As per claim 7, Wilson in view of Gase does not expressly teach wherein the stored data element for the first connection request includes a value representing a time of the first and second request.

Nevertheless in the same art of network connection establishing, Welch teaches a system for maintaining information on network connection requests using a connection record (see Fig. 7). Furthermore, Welch teaches the connection record storing not only an identifier associated with a connection request but also timestamp records relating to the time at which the connection began and the time of last activity (read as values representing times of first and second requests, see col. 8, lines 23-34), whereby Welch's system determines, based on the recorded time values for the connection, a period of inactivity for the connection and interrupts any inactive processes (see col. 6, lines 31-46, "rude interrupt").

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson and Gase with the teachings of Welch for storing a value representing a time of the first and second request, thus allowing the system taught by Wilson and Gase to monitor for inactive client application running on Wilson's computer system (see Wilson Fig. 1). The motivation for doing so would have been to free up network resources that are tied to inactive client applications.

As per claim 8, the combination of Wilson, Gase and Welch further teaches determining whether a period of time has elapsed for one or more of the connection request data elements, the determining based at least in part on inspection of one or more of the corresponding values representing times of the requests (see Welch col. 6, lines 31-46); and deleting from the data structure, at least one of the connection request data elements after the corresponding period of time has elapsed if a process associated with the identifier in the corresponding request data element has terminated (see Gase col. 5, lines 52-67, i.e. removing the identifier of the second application from the distribution list in response to a command seeking to de-register the second application, read as a terminated process).

The same motivation that was utilized for combining Wilson, Gase and Welchin claim 7 applies equally well to claim 8.

As per claim 10, Wilson further teaches wherein the connection is a dial-up connection between a modem and an Internet service provider (see Fig. 8, ref. 16a, and ¶0015)

As per claim 18, Wilson teaches a computer-readable medium comprising executable instructions for performing a method comprising:

creating a physical hardware connection in response to a request from a first process to communicate with a remote resource (see ¶0028), the process being located on a client computer (see ¶0016 - ¶0017, clients 18 running on "processor-based system", read as a process being located on a client computer);

using a connection manager, registering multiple other processes requesting communicating with remote resources via the connection (see ¶0020-¶0023) the first process sharing the physical hardware connection with the multiple other processes (see ¶0020-¶0023), the multiple other processes and the connection manager are located on the same computer (see Fig. 1, ref. 18c, 18b, and 28, respectively);

using the connection manager, removing one of the processes when the process requests a disconnection (see ¶0020, "no clients have (or remain) registered with the connection manager", also see ¶0029 "when all the clients 18 have disconnected", which the examiner is interpreting as the processes being removed when the process requests a disconnection)

maintaining the connection when a process requests a disconnection when the connection manager indicates another process is communicating with remote resources via the connection (see Fig. 3, and ¶0003, ¶0028-¶0029, and ¶0036, wherein the connection is maintained as long as one client is still connected); and

disconnecting the physical hardware connection when a process requests a disconnection when the connection manager indicates that no other process is communicating with remote resources via the connection (see ¶0025).

Wilson does not expressly teach the connection manager storing in a data structure identifiers of multiple other processes requesting to communicate with remote resources via the connection, removing an identifier of one of the processes from the stored identifiers when the process requests a disconnection, wherein the physical hardware connection is maintained when the stored identifiers indicate that another process is communicating with remote resources via the connection and disconnecting the physical hardware connection when stored identifiers indicate no other process is communicating with remote resources via the connection.

Nevertheless, in the same art of computer-to-computer session/connection establishing, Gase teaches a system for sharing a connection between multiple processes (i.e. secondary/primary applications) (see abstract). Furthermore, Gase teaches that the system maintains identifiers of registered processes that are sharing the connection (see col. 3, lines 38-45). Thus, upon a process registering with the shared connection, identification information associated with the registered process is added to the data structure (see col. 5, lines 52-62). Furthermore, upon a connected process disconnecting from the shared connection, a drop registration message is delivered by the process to remove the identification information of the disconnecting process (see col. 5, lines 52-62).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Gase for modifying the connection manager (i.e. Wilson, Fig. 1, ref. 28) to utilize stored client connection identifiers to determine whether all clients have disconnected from the connection before disconnecting the

physical hardware connection (i.e. Wilson ¶0025). The motivation for doing so would have been to take advantage of the simplicity and organizational efficiency inherent to a data structure of client connection identifiers associated with existing client connection. Such a modification would have reduced the complexity in using alternative methods for determining whether all clients have disconnected from the connection before disconnecting the physical hardware connection.

As per claim 18, Wilson in view of Gase does not expressly teach storing time values corresponding to requests made by the multiple other processes.

Nevertheless in the same art of network connection establishing, Welch teaches a system for maintaining information on network connection requests using a connection record (see Fig. 7). Furthermore, Welch teaches the connection record saving not only an identifier associated with a connection request but also timestamp records relating to the time at which the connection began and the time of last activity (read as values representing times of requests made by multiple processes, see col. 8, lines 23-34), whereby Welch's system determines, based on the recorded time values for the connection, a period of inactivity for the connection and interrupts any inactive connection (see col. 6, lines 31-46).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson and Gase with the teachings of Welch for storing time values corresponding to requests made by the multiple other client applications, thus allowing the system taught by Wilson and Gase to monitor for any inactive client applications running on Wilson's computer system (see Wilson Fig. 1). The motivation for doing so would have been to free up network resources that are tied to any inactive client applications.

As per claim 19, the combination of Wilson, Gase, and Welch further teaches the computer readable medium of claim 18 further comprising executable instructions fro removing an identifier of a process from the stored identifiers when the process has terminated (see Gase col. 5, lines 52-62).

As per claim 20, the combination of Wilson, Gase, and Welch further teaches periodically removing identifiers of processes from the stored identifiers (see Gase col. 5, lines 52-67) when the processes have terminated without requesting a disconnect (see Welch col. 6, lines 31-46, i.e. "rude interrupt"), wherein the periodically removing is based at least in part on the time values (see Welch col. 6, lines 31-46).

The same motivation that was utilized for combining Wilson, Gase and Welchin claim 18 applies equally well to claim 20.

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698) in view of Gase (US 6,363,081) ("Gase"), in further view of Welch, Jr. (US 5,862,335)("Welch"), in further view of Block et al. (US 7,433,955)("Block").**

As per claim 9, Wilson teaches wherein the remote resource being the Internet which impliedly contains web servers (see ¶0028 and Fig. 1, ref. 14). However, it is not necessarily the case that the two clients (i.e. Fig. 1, ref. 18b and 18c) are connected to the same web sever.

Nevertheless, connecting two client processes to the same web server was well known in the art. For example, in the same art of computer network session/connection establishing Block teaches a system that allows two separate client applications (see Fig. 2, ref. 210 and ref. 220) to establish a connection to the same web server (see Fig. 2, ref. 204) (see col. 1, line 64 - col. 2, line 13).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson, Gase, and Welch with the teachings of Block for allowing clients 18b and 18c to establish a connection over the Wilson's shared physical hardware connection. The motivation for doing so would have been to allow multiple client applications to simultaneously access various applications running on a single web server.

**Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698) in view of Gase (US 6,363,081) ("Gase"), in further view of Welch,**

**Jr. (US 5,862,335)("Welch"), in further view of Morris et al. (US 7,069,333)("Morris").**

As per claim 11, Wilson further teaches the method having plural application sending the connection request and communicating with remote resources over the connection (see ¶0022-¶0023).

However, the combination of Wilson, Gase, and Welch does not describe the device as being a wireless device.

Nevertheless, in the same art of computer network session/connection establishing Morris teaches a wireless device using a Winsock based communication network for establishing an internet connection (see col. 22, line 64 - col. 23, line 8).

A person of ordinary skill in the art would have been motivated to modify the teachings of Wilson, Gase, and Welch with the teachings of Morris for using a wireless device. The motivation for doing so would have been to take advantage of the mobility associated with a wireless device.

**Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698) in view of Gase (US 6,363,081) ("Gase")**

As per claim 21, Wilson teaches a method of connecting plural applications to a remote resource, comprising:

receiving a first request from a first application, located on a client computer, to connect to a remote resource (see ¶0028 and Fig. 1, ref. 14, wherein the examiner is interpreting the remote resource as the Internet);

establishing a physical hardware connection between the first application and the remote resource (see ¶0028);

receiving a second request from a second application located on the same client computer as the first application to connect to the same remote resource (see ¶0023);

using the same established physical hardware connection for the second application so that the first application and second application share the physical hardware connection to the remote resource (see ¶0023, "using the existing connection");

using a centralized connection manager, maintaining a record of which applications are using the shared connection (see ¶0020 and ¶0025, wherein the connection manager 28, impliedly maintains some record of which applications are using the shared connection so that it can determine whether all clients 18 have disconnected from the connection 12 in ¶0025);

determining whether any data elements corresponding to connection requests remain in the record; and based on the determining, maintaining the connection while at least one of the data elements corresponding to connection requests remain in the data structure and otherwise disconnecting the physical hardware connection (see ¶0025 and ¶0029, wherein impliedly the system must check some record of data elements corresponding to connection requests to determine whether all clients 18 have disconnected from the connection 12 or not).

Wilson does not expressly teach maintaining a record in a data structure at the centralized connection manager of which applications are using the shared connection, the data structure comprising data elements corresponding to connection requests that have been added to the data structure in response to connection method calls; in response to a disconnection request from either the first or second application, deleting a data element from the data structure at the centralized connection manager, the data elements corresponding to the application from which the disconnection request was received.

Nevertheless, in the same art of computer-to-computer session/connection establishing, Gase teaches a system for sharing a connection between multiple processes (i.e. secondary/primary applications) (see abstract). Furthermore, Gase teaches that the system maintains a distribution list of registered processes that are sharing the connection (see col. 3, lines 38-45, read as a data structure of data elements corresponding to application connection requests comprising: an identifier of the application for which the request for a connection was received). Thus, upon a process registering with the shared connection, identification information associated with the registered process is added to the data structure (see col. 5, lines 52-62). Furthermore, upon a connected process disconnecting from the shared connection, a drop registration message is delivered by the process to remove the registration information from the data structure (see col. 5, lines 52-62).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Gase for modifying the centralized connection manager (i.e. Wilson, Fig. 1, ref. 28) to utilize a data structure of client connection identifiers to determine whether all clients have disconnected from the connection before disconnecting the physical hardware connection (i.e. Wilson ¶0025). The motivation for doing so would have been to take advantage of the simplicity and organizational efficiency inherent to a data structure of client connection identifiers.

As per claim 24, Wilson further teaches wherein the connection is a dial-up connection between a modem and an Internet service provider (see Fig. 8, ref. 16a, and ¶0015).

**Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US 2002/0087698), in view of Gase (US 6,363,081) ("Gase"), in further view of Clark (US 6,598,068)("Clark").**

As per claim 22, Wilson does not expressly teach wherein the requests are received by an operating system located on the client computer.

Nevertheless, an operating system for managing computing resources that are shared by multiple client applications running on a single machine was well known in the art. For example, Clark teaches that "during execution, processes use resources, such as memory, modems, and printers. To take full advantage of resources, operating systems have been developed which allow multiple processes to share resources" (see col. 1, lines 15-24).

A person having ordinary skill in the art would have been motivated to modify the teachings of Wilson with the teachings of Clark for utilizing an operating system to managing the sharing of a network connection in Wilson's invention. The motivation for doing so would have been to take full advantage of an operating system's ability to efficiently manage a shared network connection.

As per claim 23 Wilson further teaches wherein the requests are receiving by the operating system through an application program interface (see ¶0035).

***Response to Arguments***

Applicant's arguments with respect to claims 21 and 24 are not persuasive.

As per applicant's argument that Wilson does not suggest maintaining a record of which applications are using a shared connection, the examiner respectfully disagrees.

For instance, the examiner is unaware of another method of how Wilson's connection manager 28 could "determine whether all the clients 18 have disconnected from the connection 12" (see ¶0025) without maintaining a record of which clients are connected to the connection 12. Furthermore, the Applicant has not provided any reasonable way of reading Wilson's system as "determining whether all the clients 18 have disconnected from the connection 12" *Id.* in the absence of a record of which clients are connected to the connection 12.

However, assuming Applicant can provide some evidence that Wilson's connection manager can be configured to "determine whether all the clients 18 have disconnected from the connection 12" *Id.* without maintaining a record of which clients are connected to the connection 12, the examiner introduces Gase to provide an obvious justification for maintaining a simple record of connection identifiers related to the clients 18 sharing the Wilson's connection 12 (see Gase, col. 3, lines 38-45). Furthermore, in Gase the primary application performs similar functions of Wilson's connection manager, since, it (1) registers secondary applications to use a shared port

in response to a connection request from said secondary applications (see abstract and col. 5, liens 52-60) (2) deregisters secondary applications from a shared port (see col. 5, liens 52-60) and (3) manages the flow of incoming packets to each of the secondary applications correlated in the distribution list (see col. 6, lines 35-46). Thus, it seems unreasonable for Applicant to read Wilson in view of Gase as NOT rendering obvious Applicant's claimed invention, which simply claims a connection manager that maintains a record of connection identifiers that is used to determine whether or not to disconnect a shared network connection.

Applicant's arguments with respect to claims 7-11 and 18-20, 22, and 23 have been considered but are moot in view of the new ground(s) of rejection.

As noted above the examiner is primarily relying on Welch, Jr. (US 5,862,335) for teachings a system having a connection record that stores time values related to connection requests (see Fig. 7 and col. 8, lines 23-34).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN HIGA whose telephone number is (571)272-5823. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571)272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRENDAN HIGA/
Examiner, Art Unit 2453